



PATENT
Attorney Docket: 1094-12

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

APPLICANT(S): Karrs et al.

GROUP: 1764

SERIAL NO.: 09/973,401

EXAMINER: Thanh P. Duong

FILED: October 9, 2001

FOR: MODULAR SYSTEM AND METHOD FOR THE CATALYTIC TREATMENT OF A
GAS STREAM

Dated: September 28, 2007

Mail Stop: Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL

Sir:

Applicants herewith include a Reply Brief in response to the Examiner's Answer dated
July 31, 2007.

CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8(a)

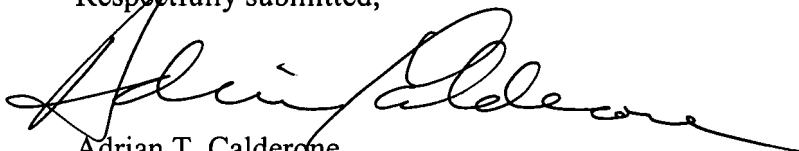
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Dated: September 28, 2007

Adrian Calderone

It is respectfully submitted that no new fees are due in connection herewith. However, should any fees be required, including fees for any required extension of time, the Commissioner is authorized to charge any fees due, or credit any overpayment to Deposit Account 04-1121.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Adrian T. Calderone', written in a cursive style.

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APPELLANTS' REPLY BRIEF

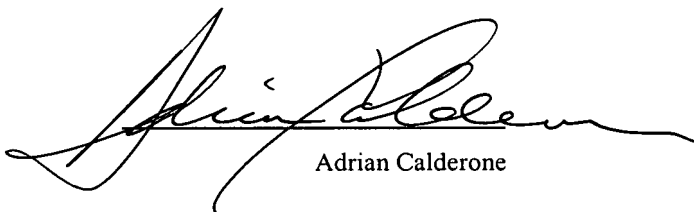
Sir:

This Reply Brief is submitted in response to the Examiner's Answer, dated July 31, 2007
to the Applicants' Appeal brief filed April 2, 2007.

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Adrian Calderone

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I. STATUS OF CLAIMS

The Examiner has issued a final rejection of pending claims 1-38 and 50-57. Applicants have cancelled claims 39-49. The claims to be examined on this Appeal are claims 1-38 and 50-57.

II. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The following references are cited in support of the rejections of the claims as listed below.

European Patent Application 0166480 (hereinafter, “EU ‘480”)

U.S. Patent No. 5,282,355 (hereinafter, “Yamaguchi”)

U.S. Patent No. 5,632,142 (hereinafter, “Surette”)

U.S. Patent No. 2,936,846 (hereinafter “Tyler”)

U.S. Patent No. 5,043,146 (hereinafter, “Ishikawa”)

U.S. Patent No. 5,397,545 (hereinafter, “Balling”)

U.S. Patent No. 6,534,022 (hereinafter, “Carlborg”)

U.S. Patent No. 5,709,088 (hereinafter, “Acaster”)

U.S. Patent No. 5,476,378 (hereinafter, “Zagoroff”)

An “admission” in Applicants’ specification at page 9, lines 15-23 (hereinafter, “Admission”).

The issues raised by the rejections are as follows:

1. Whether Claims 1-3, 8, 14 and 15 are anticipated under 35 U.S.C. § 102(b) by EU ‘480.
2. Whether Claims 1 and 21-23, 31, 34-35 and 38 are anticipated under 35 U.S.C. § 103(a) by Yamaguchi.
3. Whether Claims 2-3 are obvious under 35 U.S.C. §103(a) over EU ‘480.
4. Whether Claim 4 is obvious under 35 U.S.C. §103(a) over EU ‘480 in view of Surette.
5. Whether Claims 5, 50, 51 and 53-55 are obvious under 35 U.S.C. §103(a) over EU

‘480 in view of Surette and further in view of Tyler and Ishikawa.

6. Whether Claims 6 and 56 are obvious under 35 U.S.C. §103(a) over EU ‘480 in view of Tyler and Ishikawa.
7. Whether Claims 7 and 18-20 are obvious under 35 U.S.C. §103(a) over EU ‘480 in view of Yamaguchi.
8. Whether Claims 9-10 and 12-13 are obvious under 35 U.S.C. §103(a) over EU ‘480 in view of Balling.
9. Whether Claim 11 is obvious under 35 U.S.C. §103(a) over EU ‘480 in view of Carlborg.
10. Whether Claim 16 is obvious under 35 U.S.C. §103(a) over EU ‘480 in view of an “Admission” in applicants’ specification at page 9, lines 15-23.
11. Whether Claim 17 is obvious under 35 U.S.C. §103(a) over EU ‘480 in view of Acaster.
12. Whether Claims 21-24 are obvious under 35 U.S.C. §103(a) over EU ‘480 in view of Yamaguchi.
13. Whether Claims 25 and 26 are obvious under 35 U.S.C. §103(a) over EU ‘480 in view of Yamaguchi and further in view of Tyler and Ishikawa.
14. Whether Claims 25 and 26 are obvious under 35 U.S.C. §103(a) over Yamaguchi in view of Tyler and Ishikawa.
15. Whether Claim 27 is obvious under 35 U.S.C. §103(a) over Yamaguchi in view of Surette.
16. Whether Claim 30 is obvious under 35 U.S.C. §103(a) over Yamaguchi in view of

Carlborg.

17. Whether Claims 28-29 and 32-33 are rejected under 35 U.S.C. §103(a) as being obvious over Yamaguchi in view of Balling.
18. Whether Claim 36 is obvious under 35 U.S.C. §103(a) over Yamaguchi in view of Admission.
19. Whether Claim 37 is obvious under 35 U.S.C. §103(a) over Yamaguchi in view of Acaster.
20. Whether Claim 52 is obvious under 35 U.S.C. §103(a) over EU '480 in view of Surette and Tyler and Ishikawa, and further in view of Zagoroff.
21. Whether Claim 57 is obvious under 35 U.S.C. §103(a) over EU 480 in view of Surette and further in view of Tyler and Ishikawa.

III. ARGUMENT

The Examiner's Answer mischaracterizes the prior art and makes conclusory and subjective rejections. Applicants are compelled to submit this Reply Brief in response to the Examiner's Answer, dated July 31, 2007. The Applicants note that the Examiner has continually made unsupported assertions and factually incorrect statements in characterizing what the prior art references disclose. This is improper. Rejections must be based upon the objective evidence of record. *In re Lee*, 61 USPQ2d 1430, 1433 (Fed. Cir. 2002). Deficiencies in the cited references cannot be remedied by conclusory statements. *See, In re Zurko*, 59 USPQ2d 1693, 1697 (Fed. Cir. 2001).

The Examiner has completely misinterpreted the primary references, and rather than withdraw his rejections in light of evidence and argument to the contrary, has repeatedly changed the arguments used to reject the present application. By way of example, as described *infra*, the Examiner's first ground of rejection listed in the Examiner's Answer is different than that listed in the Final Office Action. *Compare*, Examiner's Answer dated July 31, 2007, pg. 4 and Final Office Action dated November 1, 2006, p. 2.

Of more concern to the Applicants is that the Examiner's responses to the Applicant's responses are inconsistent, making it virtually impossible to properly respond to the Examiner's various arguments. For example, on page 2 of the Examiner's answer, the Examiner states, in relation to the grounds of rejection to be reviewed on appeal "[t]he Applicant's statement of the grounds of rejection to be reviewed on appeal is correct. Note, ground of rejection is a 103 not anticipated." Examiner's Answer dated July 31, 2007, page 2. Then, *on the very next page*, the Examiner rejects the instant application under 35 U.S.C. § 102(b) *Id.*, at pg. 3. The combination

of the conflicting statements, and the fact that the legal standards for a rejection under 35 U.S.C. §102(b) and 35 U.S.C. §103 are completely different make it virtually impossible for the Applicants to craft an appropriate response.

In short, the Examiner's positions and steadfast refusal to examine the present application in conformance with the MPEP are improper and technically incorrect. The Applicants submit that the present application is in condition for allowance. Accordingly, the Applicants respectfully request that the Board reverse the present final rejection.

I. THE EXAMINER'S FIRST RESPONSE TO APPLICANTS' ARGUMENT

In response to Applicants' assertion that the Examiner's rejection of Claims 1, 8 and 14 is improper under 35 U.S.C. § 102(b) because EU '480 fails to disclose gas flow modification means that decreases velocity and improves gas flow uniformity, the Examiner stated:

The flare portion of EU '480 is the contour of the inside insulation material 33 immediately after the constricted area 13 where the gas flow decreases velocity when exiting the constricted area 33 to the flare portion and increasing gas flow uniformity in the flattened section 33 of the flare portion thus, the flare portion is equivalent to the gas flow modification section 200.

(Emphasis in original). Examiner's Answer, pg. 22.

1. The Examiner's misrepresentation of his rejection of the present application under 35 U.S.C. §102 and/or 35 U.S.C. §103 still is inadequate to anticipate and/or establish a *prima facie* case of obviousness because the reference does not disclose a gas flow modification means

The Examiner's statement in his Answer is inconsistent with his final rejection. Specifically, the Examiner misquotes his own final rejection in the Examiner's Grounds of Rejection as set forth in the Examiner's Answer. In the Final Office Action the Examiner rejected Claims 1-3, 8, 14 and 15 under 35 U.S.C. § 102 (b) as being anticipated by European

Patent Application No. 0166480 (hereinafter "EU '480"). More specifically, the Examiner contended that:

Regarding claims 1 and 8, EU '480 discloses a system for catalytically treating a gas stream which comprises: a gas phase reactor containing a catalyst (disks 20) for the treatment of the gas stream containing NO_x (page 2, line 1) in at least one catalyst bed having an upstream end and a downstream end; an axial fan (7) positioned upstream of the at least one catalyst bed and having a rotatable impeller (rotor blades as shown in Figure) for moving the gas stream through the gas phase reactor; and, c) gas flow modification means (the flare portion 34 connected after the constricted area 13 as shown in Figure and See below illustrated dwgs) positioned between the impeller and the gas phase reactor for decreasing stream velocity, and increasing gas flow uniformity.

(Emphasis added). Final Office Action dated November 1, 2006, p. 2.

The underlined portion of the above rejection has been entirely omitted from the Grounds of Rejection as stated in Section 6 of the Examiner's Answer. See pg. 4. The Examiner, in this Answer, is inconsistent. The Examiner's repeated refusal to maintain a consistent grounds for this rejection has made it nearly impossible for the Applicants to reply to the Examiner's argument; while claiming to repeat his rejection, it actually changes after each Applicants' reply. At best, the Applicants are forced to guess the true meaning of the Examiner's mutating rejection(s). Indeed, based on the Examiner's confusing statement regarding the rejection as stated in Section 6 of the Examiner's Answer, Applicants are not even sure whether this rejection is a 35 U.S.C. § 102 rejection or a 35 U.S.C. § 103 rejection.

1. The afterburner chamber does not constitute the gas flow modification means of the present application.

Regardless of whether the Examiner's assertion is a rejection under 35 U.S.C. § 102 or 35 U.S.C. § 103, it is legally deficient. Both a rejection under 35 U.S.C. § 102 and a rejection under

35 U.S.C. § 103 require that all elements of a claim be present in the prior art rejection. MPEP § 2131; *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987); *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991); MPEP §§ 2143-2143.03.

In this case, EU '480 simply does not disclose a gas flow modification means as required by element (c) of Claim 1 of the instant application. In analyzing the Examiner's new argument presented in his reply brief concerning EU '480 element 33 (thermally insulating materials), the Applicants guess that the Examiner is now claiming that the flow path formed between EU '480 element 33 and the leftmost portion of element 15 (burner) forms an element corresponding to Applicants' "gas flow modification means...for decreasing gas stream velocity and improving gas flow uniformity." The Examiner is incorrect.

The pathway formed between 15 and 33 is not described in EU '480 by any means other than the diagram. The diagram shows no increase in cross sectional area, so this would not be a means to decrease gas velocity. Where the cross sectional area does increase (i.e., the right half of burner chamber 15), it is at the burner's inlets and outlets, which would clearly disrupt gas flow uniformity. No matter where the flow path between elements 33 and 15, is analyzed EU '480 does not provide a means to decrease gas flow velocity while increasing gas flow uniformity.

The Applicants apologize for responding with a new answer in our reply brief, but feel that we must do so because of the Examiner's new grounds of rejection. While the Applicants would be entirely within their rights to simply ask the Board to ignore the Examiner's improperly raised new argument, see MPEP §1207.03, in the interests of judicial economy, the Applicants answered this newly incorrect argument of the Examiner.

Finally, the Applicants note that the Examiner did not actually address Applicants' argument in its brief rebutting this rejection. As such, the Applicants' arguments must stand un rebutted. Accordingly, EU '480 fails to disclose element (c) of Claim 1. As a result, the Examiner's response fails to rebut any argument found in Applicants' Appeal Brief dated April 2, 2007.

II. THE EXAMINER'S SECOND RESPONSE TO APPLICANTS' ARGUMENT

In response to Applicants' rebuttal of the Examiner's rejection of Claims 1, 8 and 14 as improper under 35 U.S.C. § 102(b) because that the tapered portion of casing 33 (as shown by walls 13 of Fig. 1) of EU '480 cannot act as a gas flow modification means as required by element (c) of Claim 1 of the present application, the Examiner stated "[s]uch contention is not persuasive as EU '480 shows the gas flow from the constricted area 13 thru the flare portion actually decreases the gas velocity (Figure)." Examiner's Answer dated July 31, 2007, pg. 23.

The Applicants note that once again the Examiner fails to point out with particularity what element the Examiner perceived as a gas flow modification means. In the initial Office Action, the Examiner asserted that the flow through this converging section (i.e., 13) had a "venturi effect." Office Action dated December 6, 2004, pg. 3. In both the second, third and fourth Office Actions, the Examiner asserted that the gas flow modification means was the "flare portion 34 after the constricted section 13." Final Office Action dated June 29, 2005, pg. 2; Office Action dated April 3, 2006, pg. 3; Final Office Action dated November 1, 2006, pg. 2.

In Applicants' Appeal Brief, Applicants note that it is undisputed that the "flare portion 34" is actually an outer casing which cannot act as a gas flow modification means. Indeed, in the

Examiner's Answer, the Examiner omitted all reference to flare portion 34 and it now appears the he now alleges in his Answer that afterburner chamber 14 acts as the gas flow modification means.

Applicants guess that the Examiner is now asserting that afterburner chamber 14 acts as the gas flow modification means because the gas velocity is decreased from the most convergent section of element 13 through the flare portion of element 14. However, this is an incomplete analysis of element (c) of Claim 1. Claim 1 requires that the gas flow modification means not only decrease gas flow velocity **but also** increase gas flow uniformity.

Afterburner chamber 14 simply cannot act as the claimed gas flow modification means. Applicants assume that the flare portion that the Examiner contends is a "gas flow modification means" in his Answer is the portion described in the specification of EU '480 as afterburner chamber 14. EU '480, pg. 5, lns. 6-7. According to the specification of EU '480, the afterburner chamber 14 comprises a burner 15. *Id.*, at lns. 7-8. The burner contains a plurality of openings 17, "through which a part of the stream [from convergent section 13] which sweeps the burner can penetrate into the latter," and flow disrupting glow plugs 18 and outlet 19. *Id.*, at lns. 13-14. Even a cursory inspection of these elements shows than no portion of afterburner chamber 14 actually will both decrease gas velocity and increase gas flow uniformity. Due to gas flow mechanics, the portion of afterburner chamber 14 before Roman numeral IV in Fig. 1 of EU '480 would not decrease gas velocity because the cross-sectional area remains constant. After IV, when the cross-sectional area does increase, gas flow uniformity would be heavily disrupted by the gases entering burner 15 through openings 17 and the combustion gases (with significantly increased velocity) exiting burner 15 at outlet 19. There is no portion of afterburner 14 and its

associated elements that both decreases gas velocity and increases gas flow uniformity.

As a result, the Examiner's response fails to rebut any argument found in Applicants' Appeal Brief dated April 2, 2007.

III. THE EXAMINER'S THIRD RESPONSE TO APPLICANTS' ARGUMENT

In response to Applicants' assertion that the Examiner's rejection of Claims 1, 8 and 14 is improper under 35 U.S.C. § 102(b) because EU '480 fails to disclose gas flow modification means that decreases velocity and improves gas flow uniformity, the Examiner stated:

Such contention is not persuasive. EU '480 discloses a "flare portion" connected after the constricted area as shown in Figure (see below illustrated dwgs) and the "flare portion" of EU '480 is the contour of the inside insulation material 33 immediately after the constricted area 13. The flare portion is positioned between the impeller (11) and the gas phase reactor (2) and the "flare portion" is structurally equivalent to the gas flow modification means" section 200 of the claimed invention and the "flare portion" inherently provides a function for decreasing gas velocity when exiting the constricted area 33 of the flare portion and increasing gas flow uniformity in the flattened section 33 of the flare portion, thus; the flare portion is equivalent to the gas flow modification section 200.

(Emphasis in original). Examiner's Answer dated July 31, 2007, pgs. 23-24.

1. The Examiner's contention that EU '480 discloses an equivalent "gas flow modification means" as disclosed in the present application is deficient

The Examiner's contention that the flattened area of flare portion 33 (which is really afterburner chamber 14) is an equivalent structure to the gas flow modification means of the present application is legally deficient.

According to MPEP § 2183, in order to establish an equivalent element in a means-plus-function claim, the Examiner must find that the prior art element:

1. performs the function specified in the claim,
2. is not excluded by any explicit definition provided in the specification for an equivalent, and
3. is an equivalent of the means-(or step-) plus function limitation.

Further, the MPEP requires that the Examiner provide an explanation and rationale in the Office Action as to why the prior art element is equivalent. MPEP § 2183.

Referring now to Applicants' specification, pages 12-14, the gas flow modification means includes a generally cylindrical longitudinally extending tail cone 140 having a distally pointing tapered end portion 141 with a generally conical shape. Specification, page 12, lines 9-13, Fig. 2. Moreover, the housing has a distal end section 111 which flares outward in diameter such that the exit diameter of the housing is greater than the diameter at the impeller. The combined reduction of the diameter of the tail cone at tapered end 141 and increasing diameter of the housing at flared section 111 forms an annular diffuser which increases the cross sectional area available for gas flow. This reduces the velocity of the gas and tends to flatten the velocity profile of the gas. Specification, page 12, line 21 to page 13, line 9.

Additional gas flow modification features of the invention include a guide vane unit 310 and transition duct 320, which includes outwardly flared perforated walls 321. The perforations serve to prevent flow separation and improve flow uniformity. Specification, page 13 lines 10 to page 14, line 13. As noted at page 14, lines 19-23, the gas flow modification is achieved by expanding the cross-sectional area available to gas flow and the use of guide vanes, baffles and other such surfaces for orienting the flow direction of gas.

Even a cursory comparison of the alleged “gas flow modification means” of EU ‘480 and the gas flow modification means of the present application reveals numerous differences. EU ‘480 contains none of the features of the gas flow modification system described in Applicants’ specification. Combustion chamber 15 can hardly be considered to be an equivalent structure of any of the modification features of the present invention. Indeed, the only similarity between the gas flow modification means of the present application and the alleged gas flow modification means disclosed in EU ‘480 is the fact that EU ‘480 contains a structure with outwardly flaring walls. As a result, no one skilled in the art would consider the gas flow modification means of the present application to be an equivalent structure to the afterburner chamber (14) disclosed in EU ‘480. As a result, the Examiner’s response fails to rebut any argument found in Applicants’ Appeal Brief dated April 2, 2007.

As a result, the Examiner’s response fails to rebut any argument found in Applicants’ Appeal Brief dated April 2, 2007.

2. The Examiner continues to improperly apply a flawed inherency argument

The Examiner contends that afterburner chamber 14 of EU ‘480 inherently performs the functions of decreasing gas velocity and increasing gas uniformity as required by the claims of the present application because it is an equivalent structure of the gas flow modification means of the present application. The Examiner’s contention is completely misplaced.

It is well settled that *prima facie* anticipation and/or obvious of a functional limitation can be established by structures that are “identical or substantially identical.” *In re Best*, 562 F.2d 1252, 1255; 195 USPQ 430, 433 (CCPA 1977). In relying upon the theory of inherency, “the Examiner must provide a basis in fact and/or technical reasoning to reasonably support the

determination that the allegedly inherent characteristic necessarily flows from the teachings of the prior art.” *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). As noted above, the Examiner can not show that the gas flow modification means of the present application and afterburner 14 of EU ‘480 are identical or substantially identical as set forth above.

Nor has the Examiner proffered a basis in fact and/or technical reasoning to reasonably support such an inherency argument as mandated by MPEP § 2112. It is well settled that “[t]o establish inherency, the extrinsic evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by person of ordinary skill.” MPEP § 2112 (*citing In re Robertson*, 169 F.3d 743 (Fed. Cir. 1999)) (emphasis added). Instead, the Examiner merely makes the conclusory statement that the “flare portion” inherently provides the function without even attempting to make a showing of how the twin requirements of decreased gas velocity and increased gas flow uniformity are “necessarily present.” Providing no analysis, the Examiner simply relies on his conclusory statement that the gas flow modification means of the present application and afterburner chamber 14 of EU ‘480 are structurally equivalent and inherently achieve the functionality of the claims of the present application. Under MPEP § 2112, however, this type of analysis is inappropriate. Further, Applicants’ previous analysis show this assertion impossible to be correct.

Accordingly, the Examiner’s response fails to rebut any argument found in Applicants’ Appeal Brief dated April 2, 2007.

IV. THE EXAMINER’S FOURTH RESPONSE

In response to Applicants' assertion that the Examiner's rejection of Claims 1, 8 and 14 is improper under 35 U.S.C. § 102(b) because the Examiner has not performed his analysis in accordance with the MPEP, the Examiner stated "Applicants rely on such features which are not recited in the rejected Claim 1. Although the claims are interpreted in light of the specification, limitations are not read into the claims." Examiner's Answer dated July 31, 2007, pg. 25(citing *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993)). The Examiner's response is deficient.

1. The Examiner's reliance on *In re Van Geuns* is misplaced

While it is true that limitations from a specification are not normally read into a claim, according to 35 U.S.C. § 112, ¶6,

An element in a claim for combination may be expressed as a means or step for performing a specified function without the recital of structure, materials, or acts in support thereof, ***and such claims shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.***

(Emphasis added).

Thus, a means-plus-function claim is interpreted in light of the specification, and includes both the structures disclosed in the specification and any equivalent structures. See MPEP §§ 2181-2183.

Limitation (c) of Claim 21 is in the well established means-plus-function format described and codified by statute in 35 U.S.C. § 112, ¶6. As such, it must be interpreted under the guidelines set forth in MPEP §§ 2181-2183. This includes construing the claim to cover the structures disclosed in the specifications and equivalents thereof. As a result, it is well within the Applicants' purview to describe the functional portion of the claim in light of the specification.

The burden of establishing an equivalent element rests with the Examiner. See MPEP § 2181. The Examiner cannot therefore simply ignore the description in the specification of the means for performing a specific function in examining a claim element in conformance with 35 U.S.C. § 112, ¶6. In other words, the Examiner must either establish that the reference discloses a structure explicitly found in the specification or the Examiner must establish that an equivalent element performs the same function. In either case, the Examiner must look to the specification for guidance. As such, the Examiner's reliance on *In re Van Geuns* is improper. Accordingly, the Examiner's response fails to rebut any argument found in Applicants' Appeal Brief dated April 2, 2007.

2. The Examiner's equivalency analysis is merely a reiteration of a previously presented flawed argument

In an attempt to establish an equivalent element of the gas flow modification means of the present application, the Examiner attempts to incorporate his analysis of Claim 4 of the present application (which specifically claims certain features of the gas flow modification means). The reasons that this analysis is improper are fully set out in Section IV of the Applicants' Appeal Brief dated April 2, 2007. In the interests of economy, the Applicants fully reiterate and incorporate the complete analysis set forth in Section IV of the Appeal Brief.

Accordingly, the Examiner's response fails to rebut any argument found in Applicants' Appeal Brief dated April 2, 2007.

V. THE EXAMINER'S FIFTH RESPONSE

In response to Applicants' assertion that the Examiner's rejection of Claims 1, 8 and 14 is improper under 35 U.S.C. § 102(b) because afterburner chamber 14 (i.e., the portion of EU '480 that the Examiner alleges is a "gas flow modification means") does not inherently perform the functions of decreasing gas flow velocity and increasing gas flow uniformity as required by the claims of the present application the Examiner states "Applicant admits that the flare portion (inner walls after [sic] immediately after the constricted area 13 of EU '480) is the same as the flaring walls of the present invention and providing [sic] the same function of decreasing the gas flow velocity." Examiner's Answer dated July 31, 2007, pg. 26. Applicants have never made any such admission.

1. The Examiner's equivalency analysis is merely a reiteration of a previously presented flawed argument

The Examiner completely ignores that the claims of the present application requires that the gas flow modification means both decrease gas flow velocity *and* increase gas flow uniformity. The Examiner has proffered no evidence that afterburner chamber 14 performs *both* functions required of the gas flow modification means. Nor can the Examiner provide any evidence. Afterburner chamber 14 is simply incapable of producing a gas glow with a more uniform distribution profile. This rationale is fully provided in Section I of this Brief. In the interest of economy, the Applicants will not re-perform the analysis. Rather, the Applicants fully incorporate the argument set forth in Section I of this Brief in its entirety.

Accordingly, the Examiner's response fails to rebut any argument found in Applicants' Appeal Brief dated April 2, 2007.

VI. THE EXAMINER'S SIXTH RESPONSE

In response to Applicants' assertion that the Examiner's rejection of Claims 2 and 3 is improper under 35 U.S.C. § 102(b) because EU '480 fails to inherently disclose a gas phase reactor with a velocity profile exhibiting not more than about 10% or 5% deviation as required in Claims 2 and 3 of the present application, the Examiner stated "Such contention is not persuasive as EU '480 discloses the same structural features of the claimed invention; thus, the device of EU '480 [sic] inherently *capable* of performing the intended function and/or process. (Emphasis added). Examiner's answer dated July 31, 2007, pg. 26.

1. The Examiner's response is merely a reiteration of a previously flawed rejection which has already been traversed

The Examiner's contention that the flattened area of flare portion 33 (which is really afterburner chamber 14) is an equivalent structure to the gas flow modification means of the present application is identical to his first response described in Section III of this Brief. Since the Examiner's argument with regard to the structural equivalence of the gas flow modification means is identical to that of Section III the same arguments apply.

The rationale for the error of his assertions is fully set out in Section III of this Brief. In the interests of economy, the Applicants fully reiterate and incorporate the complete analysis set forth in Section III of this Brief.

As a result, the Examiner's response fails to rebut any argument found in Applicants' Appeal Brief dated April 2, 2007.

2. The Examiner continues to improperly apply a flawed inherency argument

The Examiner contends that afterburner chamber 14 of EU '480 inherently discloses a gas

phase reactor with a velocity profile exhibiting not more than about 10% or 5% deviation as required by Claims 2 and 3 of the present application because it contains an equivalent structure of the gas flow modification means of the present application. The Examiner's contention is completely misplaced.

It is well settled that "[t]o establish inherency, the extrinsic evidence must make clear that the missing descriptive matter *is necessarily present* in the thing described in the reference, and that it would be so recognized by person of ordinary skill." MPEP § 2112 (*citing In re Robertson*, 169 F.3d 743 (Fed. Cir. 1999)) (emphasis added).

In the present case, the Examiner cannot establish that EU '480 necessarily discloses the additional 10% and 5% uniformity of Claims 2 and 3. Nowhere does EU '480 disclose or suggest the features of Claims 2 and 3. Indeed, there is no support in EU '480, nor has the Examiner provided any foundation for this allegation.

At best, EU '480 *could possibly* disclose such a feature (though technically highly improbable in light of EU '480's combustion chamber (15)), but there is no evidence that EU '480 *necessarily* discloses such a feature as required by the MPEP. Indeed, the Examiner does not even allege that EU '480 necessarily discloses such a feature. Instead, he alleges that EU '480 is *capable* of performing the function. According to the MPEP, this is hardly sufficient for establishing a proper inherency argument.

Accordingly, the Examiner's response fails to rebut any argument found in Applicants' Appeal Brief dated April 2, 2007.

VII. THE EXAMINER'S SEVENTH RESPONSE

In response to the Applicants' argument that the Examiner's rejection of Claims 1, 2, 21-23, 34-25 and 38 under 35 U.S.C. § 103 in view of Yamaguchi is improper because it fails to disclose a gas modification means in accordance with the present invention, the Examiner stated:

It is submitted that Yamaguchi's reference discloses the conical section 4 contains a frontal transition duct and a flare portion connected to the frontal transition duct. Such structure is equivalent to the gas flow modification means as recited in claim 1. With respect to the means-plus-function, it is submitted that Yamaguchi discloses the gas flow enters a frontal transition duct (smaller duct portion) then the gas flow exits the frontal transition duct to a much larger duct or flare portion of the conical section 4. The configuration of the conical section 4 provides a means for decreasing the gas velocity upon leaving the frontal transition duct to a much larger duct or flare portion and increases flow uniformity at least upstream of the heat exchanger 5 and such structure is equivalent to Applicants gas flow modification "means for decreasing stream velocity, and increasing gas flow uniformity."

(Emphasis in original). Examiners Answer dated July 31, 2007, pg. 27.

1. The Examiner's analysis does not comport with the MPEP

Drawings can be used to show the existence of claim elements in the prior art if they clearly show the structure which is claimed. MPEP § 2125 (citing *In re Mraz*, 455 F.2d 1069, 173 USPQ 25 (CCPA 1972)). "[T]he picture must show all the claimed structural features and how they are put together." *Id.* (citing *Jockmus v. Leviton*, 28 F.2d 812 (2d Cir. 1928)). When the reference does not disclose that the drawings are to scale and is silent as to dimensions, proportions of features in a drawing are not evidence of actual proportions of the invention. *Id.* (citing *Hockerson-Halberstadt, Inc. v. Avia Group Int'l*, 222 F.3d 951, 956, 55 USPQ2d 1487, 1491 (Fed. Cir. 2000)). Indeed, "it is well established that patent drawings do not define the precise proportions of the elements and may not be relied on to show particular sizes if the specification is completely silent on the issue." *Id.*

In this instance, the Examiner utilized Figs. 1-3 of Yamaguchi to support his contention that Yamaguchi discloses a gas flow modification means comprised of a frontal transition duct and a larger duct which flares outwardly. There is absolutely no mention in the specification of Yamaguchi of a conical transition duct, a frontal duct or *any* gas flow modification means. In fact, the portion that the Examiner contends is a gas flow modification means is defined in Yamaguchi defines as a flue. Col. 1, lines 21, 31, 37, 45, etc. Indeed, the Yamaguchi drawings are merely system diagrams; one cannot infer from any of the depicted units in the system that a “conical transition duct” is represented. The system diagrams utilize a vaguely trapezoidal shape to indicate the general flow of the gas through the system and its components.

Since the specification is silent as to the proportion, size and orientation of flue 4, the MPEP mandates that it is improper to rely upon the drawings as evidence of such. As such, the Examiner cannot use the drawings alone to establish the size and shape of any portion of the system described in Yamaguchi. Since the specification makes no mention of a transition duct, let alone the overall shape (i.e., conical and flared), size, and orientation (i.e., a smaller duct leading to a larger duct), Yamaguchi fails to disclose any of the features on which the Examiner relies with specificity. As a result, the Examiner’s contention that Yamaguchi discloses a gas flow modification means comprised of the aforementioned features is improper.

Accordingly, the Examiner’s response fails to rebut any argument found in Applicants’ Appeal Brief dated April 2, 2007.

2. Yamaguchi does not disclose a gas flow modification means which “decreases velocity and increases gas flow uniformity” as required by Claim 1

The Examiner's position that Yamaguchi discloses a gas flow modification means equivalent to that of the instant application is completely unsupportable. As previously stated, even a cursory reading of Yamaguchi reveals the absence of a gas flow modification means. There is absolutely no mention in the specification of Yamaguchi of a conical transition duct or *any* gas flow modification means. Even if the Examiner's reliance on solely the drawings of Yamaguchi was proper, there is nothing depicted in the drawings of Yamaguchi which shows gas flow modification means. The system diagrams merely indicate the general flow through the system and its components. Such an ambiguous drawing can not be considered to be an equivalent disclosure of the present application's gas flow modification means that "decreases velocity and increases gas flow uniformity" as required by Claim 1. Accordingly, Yamaguchi does not disclose or suggest all of the features of Claim 1 and does not support this rejection. Accordingly, the Examiner's response fails to rebut any argument found in Applicants' Appeal Brief dated April 2, 2007.

VIII. THE EXAMINER'S EIGHTH RESPONSE

In response to the Applicants' argument that EU '480 fails to disclose an axial fan which moves the gas through the gas phase reactor as required by element (b) of Claim 1, the Examiner stated:

Note, there is no explicit statement in the specification indicating the structure of a rotatable impeller correspond [sic] to the claimed function "for moving the gas stream through the gas phase reactor."

In any event, EU '480 discloses a suction fan (7) positioned upstream of at least one catalyst bed (20) and the suction fan (7) has blades (11), which is equivalent to the "rotatable impeller" of instant claim 1 and the suction action

(translation pages 3, lines 16-24) of the suction fan (7) drives the impeller which moves the gas stream through the gas phase reactor.

(Emphasis in original)> Examiner's Answer dated July 31, 2007, pg. 28.

1. The Examiner's contention that the specification does not disclose the function of the impeller is incorrect

The Examiner's contention that the specification does not include an explicit statement regarding the function of the impeller is simply incorrect. The specification of the present application states:

The present invention advantageously provides a great deal of flexibility in choosing suitable methods for controlling the system 10. For example, one method of controlling flue gas velocity and throughput is in-flight variable pitch control of the angle of the blade units 135 while the fan is operating. Systems for in-flight variable pitch control are known. See e.g., U.S. Pat. Nos. 4,090,812, 4,778,344 and 4,844,697, all of which are incorporated by reference. A second option for in-flight control is to vary the speed of impeller rotation, faster speed producing high gas velocity and throughput. Another alternative is to use individually adjustable blade units which can be manually adjusted when the fan is stopped to provide a desirable blade pitch. ***Yet another means of controlling gas flow through the catalyst beds*** is by means of spill back control, i.e., control of the recycle flow of flue gas. Spill back control is discussed in more detail below with reference to the recycle manifold 330.

(Emphasis added). Specification, pg 9, ln. 15- pg. 10, ln. 10.

It is clear then, that the specification includes a specific reference to the function of the impeller blades. In short, the impeller blades "control the gas flow through the catalyst beds (i.e., the gas phase reactor system). As such, the Examiner's contention is erroneous.

Accordingly, the Examiner's response fails to rebut any argument found in Applicants' Appeal Brief dated April 2, 2007.

2. EU '480 does not teach a rotatable impeller for moving the gas stream through the gas phase reactor

The Examiner's contention that EU '480 discloses a fan which moves gas through a gas phase reactor is incorrect. The fan of the EU '480 device has no motor: it is the exhaust gas which moves the fan. In the English translation of EU '480, at page 2, bottom paragraph it is stated:

Due to these characteristics, the exhaust gases to be cleaned, generally coming from an internal combustion engine, which are routed toward said first intake, **actuate the fan**, giving rise to suction of additional air through said second intake, and the two streams arrive at the afterburning chamber radially stratified with exterior layers formed mainly by fresh air and interior layers formed mainly by hot exhaust gases.

(Emphasis added). EU '480, p. 2.

The specification also states:

The functioning of the device which has been described is the following. The exhaust gases coming from the engine go from exhaust pipe 0 to tubular intake 1 and **act on** fan 7 making it turn and consequentially giving rise to the suction of a stream of additional air from intake 2 through nonreturn valve 3-5. The two streams proceed together, **oriented by blades 11**, but at least partially separated by stratification, with hotter layers formed mainly by exhaust gases inside, and with cooler layers formed mainly by additional air outside.

(Emphasis added). EU '480, pg. 6, lns. 18-23.

Clearly, EU '480's specification indicates that the exhaust gas (presumably powered by an automobile engine), is moved through the muffler. The fan (i.e., impeller) located in the muffler is a passive system which is acted upon. Its function is to orient the gases. Thus it does not act to move the gases through the gas phase reactor as required by element b of Claim 1. Therefore the Examiner's response is incorrect.

Accordingly, the Examiner's response fails to rebut any argument found in Applicants' Appeal Brief dated April 2, 2007.

IX. THE EXAMINER'S NINTH RESPONSE

In response to the Applicants' argument that the Examiner's rejection of Claims 21-23, 31, 34 and 38 under 35 U.S.C. § 103 under Yamaguchi is improper because it fails to disclose a means for recycling a portion of the flue gas both upstream and downstream of a convection, the Examiner stated:

It is submitted that there is no disclosure of criticality of providing a means for recycling a portion of the flue gas downstream of the axial fan to a convection section of the furnace located upstream of the axial fan or vice versa. (Internal emphasis removed).

In any event, Yamaguchi shows a fans (10) which has a means for recycling apportion of the flue gas downstream of axial fan (1) and recycling a portion of the flue gas downstream of the axial fan has [sic] the same function or equivalent means of distributing the gas ammonia gas as recycling a portion of the flue gas upstream of the axial fan as claimed. It appears the mere difference between the configuration of the claimed invention and the [sic] Yamaguchi's reference is an obvious matter of design choice of rearrangement of parts in view of absence of unexpected results.

Examiner's Answer dated July 31, 2007, pg. 29.

1. The Examiner's assertion that the application does not disclose the criticality of recycling a portion of the flue gas both upstream and downstream is incorrect

The Examiner's assertion that the specification of the present application does not disclose the criticality of recycling a portion of the flue gas upstream and downstream is in error.

The specification clearly recites, in regard to the recycle system of the present application:

The recycling of the flue gas helps to reduce fluctuations in the ammonia content of the flue gas entering the catalyst bed by more thoroughly distributing the ammonia. The fluctuation of the ammonia content of the gas is no more than about 10% deviation from the average ammonia content, preferably no more than 5% deviation, and more preferably no more than 3% deviation from the average value of the ammonia content.

Specification, pg. 15, lns. 13-20.

The specification describes one of the principal advantages of the invention as follows:

The system advantageously provides increased efficiency by rendering the velocity profile of the gas stream more uniform before it enters the reactor and preventing uneven flow through the catalyst bed. ***Furthermore, the uniformity of the composition of the gas stream is also increased.***

(Emphasis added). Specification, pg. 4, lns. 11-16.

Simply put, the specification discloses that recycling a portion of the gas upstream and downstream helps improve the uniformity of the composition of the gas stream by minimizing the deviation of the ammonia content. This function is described in the Applicants' specification as one of the principal advantages of the invention. It is clear then, that recycling a portion of the flue gas stream both upstream and downstream is an important embodiment of the present invention. As a result, the Examiner can hardly contend that the specification does not disclose the importance of recycling a portion of the flue gas both upstream and downstream.

Accordingly, the Examiner's response fails to rebut any argument found in Applicants' Appeal Brief dated April 2, 2007.

2. The Examiner has not established that recycling a portion of the flue gas to a convection section both upstream and downstream of an axial fan is an equivalent means of distributing the flue gas solely downstream of the axial fan.

The Examiner's sole rationale supporting his assertion that Yamaguchi's recycle feature is equivalent to that of the present application is the statement "recycling a portion of the flue gas downstream of the axial fan has the same function or equivalent means of distributing the gas ammonia gas as recycling a portion of the flue gas upstream of the axial fan as claimed."

Examiner's Answer dated July 31, 2007, pg. 29.

This conclusory statement is nearly identical to his final rejection: "recycling a portion of the flue gas downstream of the axial fan to either upstream or downstream of the axial fan does

not alter the mechanism of purifying the flue gas stream.” Final Office Action dated November 1, 2006, p. 5.

As previously stated in the Applicants’ Appeal Brief, this rationale is inadequate under the MPEP and technically incorrect. See Applicants’ Appeal Brief dated April 2, 2007, Section II. The rationale supporting this argument has already been performed in section II of Applicants’ Appeal Brief dated April 2, 2007. In the interests of economy, the Applicants fully reiterate and incorporate the complete analysis set forth in Section II of that Brief. Accordingly, the Examiner’s response fails to rebut any argument found in Applicants’ Appeal Brief dated April 2, 2007.

X. THE EXAMINER’S TENTH RESPONSE

In response to the Applicants’ argument that the Examiner’s rejection of Claims 21-23, 31, 34 and 38 under 35 U.S.C. § 103 under Yamaguchi is improper because his proposed modification would render Yamaguchi’s invention unsuitable for its intended purpose the Examiner stated:

Such argument is not persuasive. It is not clear how recycling a portion of the flue gas as disclosed by Yamaguchi would severely damage the gas turbine because the recycled flue gas of Yamaguchi is upstream of the gas turbine. In fact, recycling a portion of the flue gas upstream of the axial fan or gas turbine as claimed will actually damage and reduce the lifetime of the axial fan or turbine being the flue gas comprises gases such as NO_x and SO_x, which are highly corrosive gases.

Examiner’s Answer dated July 31, 2007, pg. 30.

The Examiner has completely misinterpreted Applicants’ argument. Yamaguchi only discloses recycling a portion of the flue gas downstream of gas turbine, which the Examiner

contends is an impeller for moving the gas through a gas phase reactor. Claim 21 (and its dependent claims) requires that a portion of the flue gas be recycled to a convection section both upstream and downstream of an axial fan.

In order to meet the MPEP's requirements for a proper rejection under 35 U.S.C. § 103, the Examiner must establish that each and every element of the claims was taught in the reference. See MPEP § 2143. Therefore, he proposed the following modification:

“it would have been obvious in view of Yamaguchi to one having ordinary skill in the art to recycle a portion of the flue gas upstream of the gas turbine to effectively pressurized [sic] and deliver the gas back into the catalytic system for gas treatment and such configuration provides a cost savings by eliminating the need for additional exhaust fan.”

Final Office Action dated November 1, 2006, pgs. 4-5.

Yamaguchi does not disclose in its specification (including the drawings) any element upstream of the gas turbine (i.e., the element that the Examiner contends is an axial fan) other than the gas inlet and the air inlet which are required to power the turbine. Yamaguchi certainly does not disclose a convection section located upstream of the gas turbine. Therefore, any flue gas recycled downstream of Yamaguchi's gas turbine to a position upstream of the gas turbine would necessarily flow through the gas turbine.

Further, there is no suggestion in Yamaguchi to add a convection section or similar section upstream of the gas turbine. The system described in Yamaguchi is designed to remove exhaust gases which are generated from the gas turbine itself. No one skilled in the art would be motivated to add a convection section upstream (i.e., before the gas is generated) of the article which generates gas in order to treat it.

Therefore, the only way that Yamaguchi could be modified to recycle flue gas upstream

would be through the fuel or gas streams. The composition of the flue gas is simply not suitable for this purpose. As the Examiner succinctly point out:

In fact, recycling a portion of the flue gas upstream of the axial fan or turbine being the flue gas will actually damage and reduce the lifetime of the axial fan or turbine being the flue gas comprises gases such as NO_x and SO_x, which are highly corrosive gases.

Examiner's Answer dated July 31, 2007, pg. 30.

In short, pumping in these gases would actually prohibit the proper operation of the gas turbine and effectively disable the system disclosed in Yamaguchi.¹ Since the Examiner's proposed modification would effectively destroy the operability of the system described in Yamaguchi (i.e., the turbine would not operate) the Examiner's modification would, at a minimum, render the prior art invention unsatisfactory for its intended purpose. See MPEP § 2143.01. As such, the Examiner's proposed modification is improper.

Accordingly, the Examiner's response fails to rebut any argument found in Applicants' Appeal Brief dated April 2, 2007.

XI. THE EXAMINER'S ELEVENTH RESPONSE

Regarding the Applicants' contention that the rejection of Claims 4 and 27 is improper because there is no motivation to combine the primary reference (i.e., EU '480 for Claim 4 and Yamaguchi for Claim 27) with Surette, the Examiner stated: "[t]he argument on pages 38 and 69 with respect to the teachings of Surette [sic] has been addressed in paragraph 4 of the final office action." Examiner's Answer dated July 31, 2007, pg. 30.

This response does not even attempt any manner of rebuttal. Instead, the Examiner

¹ Note that the present invention avoids this problem because it recycles the gas to a convection section of the system as opposed to the fan itself.

merely ignores the Applicants' arguments and concludes that they have already been addressed. This can hardly be considered a response, let alone a rebuttal.

Since the Examiner has not even attempted to rebut any of the Applicants' arguments, this response fails to rebut any argument found in Applicants' Appeal Brief dated April 2, 2007.

XII. THE EXAMINER'S TWELFTH RESPONSE

With regard to the Applicants' position that Claim 6 is not obvious over EU '480 in view of Tyler and Ishikawa because neither Tyler nor Ishikawa discloses outwardly flaring walls, the Examiner stated:

Both Tyler and Ishikawa discloses [sic] the perforated walls and the mere changing the [sic] shape of the perforated walls which flare outward is within the ordinary skill in the art. See *In re Dailey*.

Examiner's Answer dated July 31, 2007, pg. 31.

The Examiner's reliance on *In re Dailey* is misplaced. The *Dailey* court held that absent persuasive evidence that the particular configuration is significant, merely changing the shape of an object is well within the ordinary skill in the art and is generally not afforded any patentable weight. See *In Re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966). Thus, if the shape/configuration is "significant" it may be afforded patentable weight.

In this case, the shape of the walls is a significant feature. According to the specification of the present application:

The housing 110 has a distal end section 111 which flares outward in diameter such that the exit diameter of the housing 110 is greater than the diameter at the impeller. As can be seen, the cross-sectional area of the annular space between the tail cone 140 and the housing 110 is the area available for gas flow. The combined reduction of the diameter of the tail cone 140 at tapered end 141 and the increasing diameter of the housing at flared section 111 forms an annular diffuser

which increases the cross sectional area available for gas flow and thereby reduces the velocity of the gas and tends to flatten the velocity profile of the gas.

Page 12, ln. 21-Page 13, ln. 9.

Clearly, the shape of the walls helps reduce the velocity profile of the gas, a feature which is required in every independent claim (and by extension every dependent claim). Thus, the shape of the walls is a significant feature.

Since the outwardly flaring shape of the walls is a significant feature, the shape of the walls is more than merely a design choice well within the ordinary skill of the art. Therefore, the general holding of *In re Dailey* does not apply. As such, the Examiner's reliance on its holding is misplaced.

Accordingly, the Examiner's response fails to rebut any argument found in Applicants' Appeal Brief dated April 2, 2007.

XIII. THE EXAMINER'S THIRTEENTH RESPONSE

With regard to the Applicants' assertion that the rejection of Claims 9, 10, 12 and 13 over EU '480 in combination with Balling is improper because there is no motivation to combine the references, the Examiner stated:

Such contention [sic] is not persuasive since it is desirable to provide a plurality of stackable catalyst modules as taught by Balling in the device of EU '480 to increase the conversion of NO_x versus the single module as shown in EU '480 (Figure).

The Examiner's response does not even attempt to rebut Applicants' argument regarding the motivation to combine the references. Instead, the Examiner merely reiterates his motivation

to combine the references. More specifically, in rejecting Claims 9, 10, 12 and 13 under 35 U.S.C. § 103 over EU '480 in view of Balling, the Examiner stated:

Thus, it would have been obvious in view of Balling to one having ordinary skill in the art to modify catalyst elements of EU '480 with honeycomb catalyst converters as taught by Balling *to facilitate the conversion of NO_x to nitrogen*.

(Emphasis added). Final Office Action dated November 1, 2006, pp. 10-11.

In short, the Examiner has merely cut and pasted his rationale regarding a motivation to combine the references into a conclusory statement in an attempt to rebut the Applicants assertion regarding the motivation to combine the references. The Examiner has performed no analysis regarding the motivation to combine EU '480 and Balling. As such, the Examiner has not even attempted rebut the Applicants argument found in Section VIII of the Applicants' Appeal Brief dated April 2, 2007.

Accordingly, the Examiner's response fails to rebut any argument found in Applicants' Appeal Brief dated April 2, 2007.

XIV. THE EXAMINER'S FOURTEENTH RESPONSE

With regard to the Applicants' assertion that any 35 U.S.C. § 103 rejection which utilizes Acaster is improper because it is non-analogous art, the Examiner stated:

Such contention is not persuasive as it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, it is pertinent to use a variable speed impeller versus a single speed impeller to control the flow rate of the exhaust gas and the operating pressure of the gas phase reactor.

Examiner's Answer dated July 31, 2007, pg. 31.

The Examiner's response does not even attempt to rebut Applicants' argument regarding the availability of Acaster as analogous art. Instead, the Examiner merely reiterates his motivation to combine the references. More specifically, in rejecting Claim 17 under 35 U.S.C. § 103 over EU '480 in view of Acaster, the Examiner stated:

Thus, it would have been obvious in view of Acaster to one having ordinary skill in the art to modify the fan of EU '480 with impeller has [sic] a variable speed of rotation as taught by Acaster *in order to keep up with demand of the exhaust gas and pressure*.

(Emphasis added). Final Office Action dated November 1, 2006, p. 12.

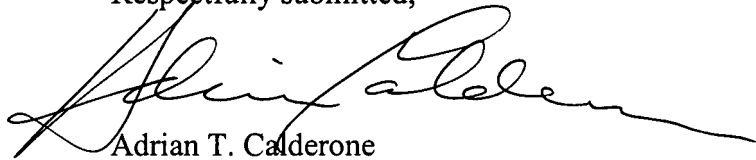
This proffered rationale may be relevant to the motivation to combine the references, but it does not bear any relation to Acaster as analogous art. In short, the Examiner has merely cut and pasted his rationale regarding a motivation to combine the references into a conclusory statement in an attempt to rebut the Applicants assertion that Acaster is non-analogous art. The Examiner has performed no analysis regarding the status of Acaster as analogous art. As such, the Examiner has not even attempted rebut the Applicants argument found in Section XI of the Applicants' Appeal Brief dated April 2, 2007.

Accordingly, the Examiner's response fails to rebut any argument found in Applicants' Appeal Brief dated April 2, 2007.

CONCLUSION

The Examiner's repeated conclusory statements, flawed technical reasoning and improper analysis of the claims of the present application fail to rebut any of the arguments set forth by the Applicants in their Appeal Brief dated April 2, 2007. Accordingly, the Examiner's rejections are improper and must be withdrawn. Applicants submit that the present application is in condition for allowance and respectfully request reversal of the rejections by the Board.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Adrian T. Calderone', written over a horizontal line.

Adrian T. Calderone

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